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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,885	02/05/2004	Robert S. Cooper	114.0004	5349
27997	7590	01/24/2006	EXAMINER	
PRIEST & GOLDSTEIN PLLC 5015 SOUTHPARK DRIVE SUITE 230 DURHAM, NC 27713-7736			GAUTHIER, GERALD	
			ART UNIT	PAPER NUMBER
			2645	

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/772,885

**Applicant(s)**

COOPER ET AL.

**Examiner**

Gerald Gauthier

**Art Unit**

2645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claim(s) 1-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Furman et al. (US 6,049,594) in view of Will (US 5,917,891).

Regarding **claim(s) 1**, Furman discloses a voice dialing system (FIG. 5 and column 1, lines 9-11) comprising:

a directory (20 on FIG. 2) including entries for telephone numbers that may be called by a user (FIG. 2 and column 5, lines 35-45);

a called party cache (15 on FIG. 2) including entries a user is considered likely to call (FIG. 2 and column 5, lines 32-35) [The customer billing record database 15 includes the telephone numbers most frequently dialed by the customer]; and

a voice dialing module for receiving a voice input from a user, employing voice recognition to analyze the voice input, examining the directory to identify candidates for matched entries from the directory matching the voice input, (FIG. 5 and column 6, line 63 to column 7, line 10).

Furman discloses a user profile database but fails to disclose the voice-dialing module being operative to assign an increased likelihood of matching to a directory entry appearing in the called party cache.

However, Will teaches constructing a list of recognition results that are candidates for matches to the voice input with the entries on the list ranked by confidence, and comparing the list of recognition results with the called party cache to determine if entries in the list appear in the called party cache, the voice dialing module assigning an increased likelihood of matching to a list entry appearing in the called party cache (column 7, lines 34-56).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Furman using the teaching of adaptive model behavior as taught by Will.

This modification of the invention enables the system to provide a voice dialing module being operative to assign an increased likelihood of matching to a directory entry appearing in the called party cache so that the system would allow better recognition based on the user's calling behavior.

Regarding **claim(s) 2**, Will teaches a voice dialing system, wherein entries within the called party cache are associated with indicia indicating a probability that a contact represented by an entry will be called by the user (column 7, lines 44-56).

Regarding **claim(s) 3**, Furman discloses a voice dialing system, wherein the directory may include multiple entries for a party, each entry identifying a contact location at which the party may be called (FIG. 6 and column 8, lines 48-57).

Regarding **claim(s) 4**, Will teaches a voice dialing system, wherein one or more entries associated with a party may appear in the cache, the appearance and relative position in the cache of an entry associated with a party indicating a probability that the user will call the party at the location indicated by the entry (column 7, lines 44-56).

Regarding **claim(s) 5**, Furman disclose a voice dialing system, wherein the call probabilities for entries within the called party cache are based on a past history of calls by the user (FIG. 3 and column 5, lines 22-34).

Regarding **claim(s) 6**, Will teaches a voice dialing system, wherein the call probabilities for entries within the called party cache are based on knowledge of the user as a caller (column 7, lines 44-56).

5. **Claim(s) 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Furman in view of Will as applied to **claim(s) 6** above, and further in view of Gadd et al. (US 2005/0033582 A1).

Regarding **claim(s) 7**, Furman in combination with Will as applied to **claim(s) 6** above differs from **claim(s) 7**, in that it fails to disclose the knowledge of the user as a caller includes knowledge of an organization in which the user is employed.

However, Gadd, in the same field of endeavor, teaches a voice dialing system, wherein the knowledge of the user as a caller includes knowledge of an organization in which the user is employed (FIG. 1 and paragraph 0182).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Furman in combination with Will using the spoken language interface repository as taught by Gadd.

This modification of the invention enables the system to provide the knowledge of the user as a caller includes knowledge of an organization in which the user is employed so that the system would resolve errors by interacting with the user (Gadd: paragraph 0007).

6. **Claim(s) 9, 10, 11 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Furman in view of Will as applied to **claim(s) 8** above, and further in view of Levin et al. (US 2003/0149566 A1).

Regarding **claim(s) 9**, Furman in combination with Will as applied to **claim(s) 8** above differs from **claim(s) 9**, in that it fails to disclose the voice dialing module reorders the list by moving entries in the list that also appear in the cache to a higher position in the list.

However, Levin, in the same field of endeavor, teaches a voice dialing system, wherein the voice dialing module reorders the list by moving entries in the list that also appear in the cache to a higher position in the list (FIG. 1 and paragraph 0030).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Furman in combination with Steinbiss using the recognizer as taught by Levin.

This modification of the invention enables the system to provide the voice dialing module reorders the list by moving entries in the list that also appear in the cache to a higher position in the list so that the system would separate the task of speech recognition from an index search task (Levin: paragraph 0014).

Regarding **claim(s) 10**, Levin, teaches a voice dialing system, wherein the voice dialing module reorders the list by adding an increment to the confidence score of all entries in the list that reappear in the cache and reordering the list on the basis of the changed confidence score (FIG. 1 and paragraph 0035).

Regarding **claim(s) 11**, Furman discloses a voice dialing system, wherein an initial set of entries to the called party cache for a user is made when a user is added as a possible user of the system (FIG. 6 and column 9, lines 6-17).

Regarding **claim(s) 14**, Furman discloses a voice dialing system, wherein if the called party cache is full and an addition is to be made, an entry is deleted from the called party cache before making the addition, the deleted entry being the entry having the lowest estimated likelihood that it will be called by the user (column 13, lines 19-32).



7. **Claim(s) 12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Furman in view of Will in further view of Levin as applied to **claim(s) 11** above, and further in view of Stubley (US 2005/0152511 A1).

Regarding **claim(s) 12**, Furman in combination with Will and Levin as applied to **claim(s) 11** above differs from **claim(s) 12**, in that it fails to disclose the called party cache is reordered when an entry in the called party cache is determined to match a voice input provided by a user in voice dialing.

However, Stubley, in the same field of endeavor, teaches a voice dialing system, wherein the called party cache is reordered when an entry in the called party cache is determined to match a voice input provided by a user in voice dialing, the reordering being performed so as to take into account the estimated probability that the entry will be called by the user in the future (FIG. 4 and paragraph 0104).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Furman in combination with Will and Levin using the call-directing unit as taught by Stubley.

This modification of the invention enables the system to provide the called party cache is reordered when an entry in the called party cache is determined to match a voice input provided by a user in voice dialing so that the system would efficiently direct an incoming call to a correct directory entry (Stubley: paragraph 0005).

Regarding **claim(s) 13**, Furman discloses a voice dialing system, wherein an entry is added to the called party cache if a directory entry matches a voice input by the user and the entry does not appear in the called party cache (FIG. 6 and column 9, lines 26-33).

8. **Claim(s) 15-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ng et al. (US 6,529,585 B2) in view of Will.

Regarding **claim(s) 15**, Ng discloses a method of voice dialing (FIG. 1 and column 1, lines 7-9), comprising the steps of:

receiving a voice input from a user indicating a party the user wishes to call (FIG. 1 and column 3, lines 1-9) [The voice label processor 110 receives the calling party's voice input wishing to establish a communication with a called party].

Ng discloses a voice label processing apparatus but fails to disclose a voice recognition to analyze the voice input and a directory to construct a list of recognition results.

However, Will teaches employing voice recognition to analyze the voice input (column 7, lines 34-38);

utilizing a directory to construct a list of recognition results that are candidates for matches to the voice input ranked by confidence (column 7, lines 38-43);

comparing the list of recognition results with a called party cache including entries the user is considered likely to call (column 7, lines 44-48); and

assigning an increased likelihood of matching to a list entry appearing in the called party cache (column 7, lines 48-56).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Ng using the teaching of adaptive model behavior as taught by Will.

This modification of the invention enables the system to provide a voice recognition to analyze the voice input and a directory to construct a list of recognition results so that the system would allow better recognition based on the user's calling behavior.

Regarding **claim(s) 16**, Will teaches a method, wherein the step of assigning includes reordering the list of recognition results if one or more entries in the list matches an entry in the called party cache (column 7, lines 34-43).

Regarding **claim(s) 17**, Will teaches a method, further comprising the step of sequentially presenting the entries in the reordered list to the user for confirmation and dialing an entry upon receiving confirmation from the user (column 7, lines 34-43).

Regarding **claim(s) 18**, Ng discloses a method of voice dialing, wherein the step of sequentially presenting the entries to the user for confirmation is followed by a step of

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determining if the matching entry appears in the cache and adding the matching entry to the cache if it does not appear in the cache (FIG. 1 and column 7, lines 62-66).

Regarding **claim(s) 19**, Will teaches a method of voice dialing, wherein the step of sequentially presenting the entries to the user for confirmation is followed by a step of reordering the cache if the matching entry does appears in the cache (column 5, lines 61-66 and (column 7, lines 34-43).

#### ***Allowable Subject Matter***

9. **Claim(s) 8** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

10. Applicant's arguments with respect to **claim(s) 1-19** have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gerald Gauthier whose telephone number is (571) 272-7539. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**GERALD GAUTHIER**  
**PATENT EXAMINER**

g.g.  
January 18, 2006

**OVIDIO ESCALANTE**  
**PATENT EXAMINER**

*Ovidio Escalante*